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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/962,560 10/31/97 HILTON

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EXAMINER

CARLSON, K

ART UNIT

PAPER NUMBER

1653

DATE MAILED:

10/09/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/962,560

Applicant(s)

HILTON ET AL.

Examiner

Karen Cochran Carlson, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-12, 41-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 6-12, 41-51 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

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Applicants response filed July 12, 2001 (Paper #24) has been received. It appears that the breadth of the claims is such that both examination and prosecution is being hampered.

Below find another restriction between pending claims 6-12 and 41-51. There are literally thousands of inventions claimed, even above those related to SOCS1-SOCS15, and while Applicants state that the claims should be examined on previously elected SEQ ID NO:3 and 4, the claims have not been so limited, and it is not possible to efficiently examine the scope of the claims.

Each invention will not be listed separately *per se* because there are so many and to list them would only add confusion. Rather, Applicant is requested to draft the specific invention that should be examined.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

In Claims 6 and 41, an amino acid and/or sequence for each "X" variable of SEQ ID NO:51 should be specified, and the amino acid for each "X" variable specified in Claim 6 should be the same as in Claim 41. The Examiner recognizes the burden of a second restriction on Applicants; please also choose an amino acid for each "X" variable that corresponds to the mouse (and rat) and human homolog of the same SOCS protein. For example, if Applicants wish DNA encoding mouse SOCS1 protein comprising SEQ ID NO:4 searched, then choose the variables in SEQ ID NO:51 that would be found in SEQ ID NO:4. Additionally, then, choose amino acids for the variables that would be found in rat SOCS1 sequence ID NO:12 and human SOCS1 sequence SEQ ID NO:10.

In Claims 42 and 43, choose two SOCS box sequences found in the mouse (and rat) or human homolog sequences chosen by Applicants in Claims 6 and 41. Expounding on the

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example above, if the DNA encoding mouse and human homologs of SOCS1 is the invention that Applicants wish examined, then the SOCS boxes chosen would be SEQ ID NO:52 and 55.

In Claims 45 and 46, choose two amino acid sequences found in the mouse or human homolog sequences chosen by Applicants in Claims 6 and 41. Again, expounding on the example above, if the DNA encoding mouse, rat, and human homologs of SOCS1 is the invention that Applicants wish examined, then the sequences chosen would be SEQ ID NO:4 and 12 and 10.

In Claims 47, 48, and 49, choose three nucleic acid sequence found in the mouse, rat, or human homolog sequences chosen by Applicants in Claims 6 and 41. Again, expounding on the example above, if the DNA encoding mouse, rat, and human homologs of SOCS1 is the invention that Applicants wish examined, then the sequences chosen would be SEQ ID NO:3 and 11 and 9.

The inventions are distinct, each from the other because of the following reasons:

Any of the sequences possible will differ in structure and in function (as admitted by Applicants throughout the specification). Therefore, the sequences are patentably distinct.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Applicants may wish to provide "cleaner" claims directed to their invention. For example, again expounding on the examples above, pending claims could be canceled and new claims could be added:

52. An isolated nucleic acid molecule encoding a SOCS1 protein comprising a SOCS box set forth in SEQ ID NO:52 or SEQ ID NO:55, wherein said protein inhibits IL-6 mediated signal transduction.

53. The isolated nucleic acid molecule of Claim 52, wherein the encoded protein is derived from mouse or rat.

54. The isolated nucleic acid molecule of Claim 53, wherein said SOCS1 protein comprises SEQ ID NO:4 or SEQ ID NO:12.

55. The isolated nucleic acid molecule of Claim 54, wherein said nucleic acid molecule comprises SEQ ID NO:3 or SEQ ID NO:11.

56. the isolated nucleic acid molecule of Claim 52, wherein the encoded protein is derived from human.

57. The isolated nucleic acid molecule of Claim 56, wherein said SOCS1 protein comprises SEQ ID NO:10.

58. The isolated nucleic acid molecule of Claim 57, wherein said nucleic acid molecule comprises SEQ ID NO:9.

59. The isolated nucleic acid molecule of Claim 52, wherein said protein inhibits IL-6 mediated gp130 phosphorylation and IL-6 mediated STAT3 phosphorylation.

60. An expression vector comprising the nucleic acid molecule of Claim 52.

61. A host cell comprising the expression vector of Claim 60.

62. A method of producing SOCS1 protein, said method comprising culturing the host cell of Claim 61 under conditions allowing the expression of SOCS1, and isolating the SOCS1 protein.

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Additionally, again noting the burden of a second restriction on Applicants, the Examiner would consider rejoining DNA and protein. For example, again expounding on the election examples above, claims to the SOCS1 protein could be added for consideration:

63. An isolated SOCS1 protein comprising a SOCS box set forth in SEQ ID NO:52 or SEQ ID NO:55, wherein said protein inhibits IL-6 mediated signal transduction.

64. The SOCS1 protein of Claim 63, wherein said protein is derived from mouse or rat.

65. The SOCS1 protein of Claim 64, wherein said SOCS1 protein comprises SEQ ID NO:4 or SEQ ID NO:12.

66. The SOCS 1 protein of Claim 63, wherein SOCS1 protein is derived from human.

67. The SOCS1 protein of Claim 66, wherein said SOCS1 protein comprises SEQ ID NO:10.

68. The SOCS1 protein of Claim 63, wherein said protein inhibits IL-6 mediated gp130 phosphorylation and IL-6 mediated STAT3 phosphorylation.

It appears that presentation of claims in this exemplified format would greatly aid in the prosecution and examination of this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen Cochrane Carlson, Ph.D. whose telephone number is 703-308-0034. The examiner can normally be reached on 7:00 AM - 4:00 PM, off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Christopher Low can be reached on 703-308-2329. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.



KAREN COCHRANE CARLSON, PH.D.
PRIMARY EXAMINER